

# Assessing Use of Gender Diverse Language in Patient Education Materials on Breast Reconstruction

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**Background:** Utilizing inclusive terminology in patient education materials is an increasing area of focus in plastic surgery. Over 300,000 cases of breast cancer were diagnosed in 2020, affecting cisgender and gender diverse patients alike. Both cisgender and gender diverse patients may choose to undergo breast reconstruction. This study aims to assess the use of inclusive language in online patient education materials on reconstruction after breast cancer.

**Methods:** Materials were collected from all academic hospitals with a plastic surgery integrated and/or independent residency program, 97 in total. Programs were further classified by the presence of a comprehensive gender program. Materials were analyzed for gender diverse terminology outlined by the National LGBTQIA+ Health Education Center. A chi-square test evaluated for statistical significance of inclusive terminology based on the presence or absence of a comprehensive gender program.

**Results:** The majority (75%) of programs referenced cis women alone, with 25% referring to both men and women or using gender neutral terms such as “patients.” Although most (85%) programs wrote in second person (“you”), 15% used she/her/hers pronouns alone, and no programs utilized gender diverse language outlined by the National LGBTQIA+ Health Education Center. The presence or absence of a comprehensive gender program was not predictive of the use of inclusive terminology ( $P = 0.32$ ).

**Conclusions:** This study found that only 25% of breast reconstruction materials contained inclusive gender terminology. Plastic surgeons should provide patient education materials with language that supports members of a gender diverse population to facilitate a safe, inclusive space and conversation. (*Plast Reconstr Surg Glob Open* 2022;10:e4400; doi: [10.1097/GOX.0000000000004400](https://doi.org/10.1097/GOX.0000000000004400); Published online 20 June 2022.)

## INTRODUCTION

Utilizing inclusive language in patient education materials is an increasing area of focus in plastic surgery; the use of terminology carries inherent meaning and significance that impacts patient well-being and overall utilization of healthcare.<sup>1-5</sup> For example, the previous “gender

confirmation” surgery to the current “gender affirmation” has been adopted by many experts in the field,<sup>1</sup> and this language continues to progress as plastic surgeons strive toward nonpathologizing speech to improve gender diverse care. Plastic surgeons are on the forefront of gender-affirming care and therefore bear the onus to focus on thoughtful and positive terminology in all dimensions of practice, whether directly or indirectly associated with gender care.<sup>6</sup>

The National LGBTQIA+ Health Education Center is an organization that provides guidance on steps clinicians and healthcare organizations may take to improve access to care, reduce disparities, and improve the health-related literature for their LGBTQIA+ patients.<sup>7</sup> This organization emphasizes gender inclusive terminology and demonstrates one of the primary ways language can be all-embracing.<sup>7</sup> The term “transgender” is used to describe individuals whose gender identity, expression, or behavior “does not conform to what is socioculturally accepted as, or typically associated with, the legal and medical sex to which they were assigned at birth.”<sup>8</sup> Nonbinary refers to “transgender or gender nonconforming person who

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identifies as neither male nor female.”<sup>9</sup> Approximately 0.5% of United States adults identify as transgender or nonbinary; historically, this patient population encounters significant barriers to healthcare access compared to cisgender patients on several levels: governmental, insurance, administrative policy, and even academic establishments.<sup>8,10,11</sup> Additionally, transgender and nonbinary patients have a greater risk of being uninsured and in lower income brackets, further exacerbating these healthcare disparities.<sup>4</sup> Despite greater recognition and discussion of such disparities, both access to and utilization of healthcare remain limited.<sup>4</sup>

Furthermore, transgender and nonbinary patients undergo higher rates of discrimination in health care as compared to cisgender patients.<sup>7,12</sup> When considering the significant barriers to accessing appropriate care in tandem with the increased discrimination faced within healthcare, it is not surprising that transgender patients are less likely to pursue routine preventative care including cancer screening.<sup>3,13</sup> Assessing cancer risk in this community is especially important as studies indicate sexual and gender minority breast cancer survivors have increased risk factors for cancer including higher rates of smoking, obesity, and alcohol intake as well as lower rates of protective factors such as pregnancy and childbirth.<sup>14</sup> In addition, for patients on hormone therapy for gender affirmation, the therapy itself can alter risk factors.<sup>15</sup>

Despite breast cancer affecting cisgender and gender diverse patients equally, cancer screening guidelines remain focused on cisgender patients, reflecting additional challenges in navigating screening for transgender and nonbinary patients.<sup>16-19</sup> Individuals of any gender identity are possible breast reconstruction candidates, reflecting the need for gender inclusive education materials.<sup>11,19</sup> Additionally, although “breast reconstruction” is the terminology used in this article to distinguish reconstruction performed after a breast cancer diagnosis, some patients may prefer the terminology “chest reconstruction” during these important treatment conversations.

Utilizing inclusive gender terminology is of utmost importance as thoughtful and validating language contributes to creating a safe, open space in the healthcare setting; ultimately, with hopes to increase healthcare utilization while decreasing health disparities among gender diverse patients.<sup>20</sup> This study aims to assess use of inclusive language in online patient education materials on breast reconstruction, hypothesizing that the majority of breast reconstruction patient education materials write using pronouns specific to cisgender women.

## METHODS

Free, online patient education resources were collected from all academic hospitals with a plastic surgery integrated and/or independent residency program, 97 total. These hospital systems perform the majority of breast reconstruction procedures within the United States.<sup>21</sup> The website of each academic program was

### Takeaways

**Question:** Do online breast reconstruction patient education materials utilize inclusive terminology?

**Findings:** The majority of programs (75%) reference cis women alone. The presence or absence of a comprehensive gender program (offering both top and bottom surgery) was not predictive of the use of inclusive language.

**Meaning:** Plastic surgeons should provide patient education materials with language that supports members of a gender diverse population to facilitate a safe, inclusive space and conversation.

searched with the terminology, “breast reconstruction.” The search term was queried with the name of the academic program using the search engine Google (Google, Inc., Mountain View, Calif.) from a United States Internet Protocol address on January 10, 2021. Data were collected from each academic institution’s home breast reconstruction web page on patient education. External links, additional resources, advertisements, and references were not included within the review. To limit potential search result bias, internet browser history was deleted before the search, as well as cookies, location tools, and user account information.

Materials were analyzed for gender diverse terminology outlined by the National LGBTQIA+ Health Education Center (Table 1).<sup>22</sup> This includes pronouns such as “she/her/hers,” “he/his,” “sie/zie,” “ze,” or “they” or the use of nonspecific pronouns such as “you.”<sup>20</sup> Additionally, sites were assessed for use of diverse gender terminology (women, transwomen, men, transmen and/or nonbinary). Each program was classified based on both pronoun and gender terminology use. Type(s) of pronoun(s) and amount of pronouns used were recorded. Gender terminology was also assessed and classified based on gender term(s) listed and the amount of gender terms listed. Programs were further stratified by the presence or absence of a comprehensive gender program, defined as offering both top and bottom surgery. The web sites of each academic institution with an integrated and/or independent plastic surgery residency program were queried for information on gender surgeries offered to achieve this classification.

If multiple pronouns or genders were used the material was classified as inclusive. Alternatively, if the patient education material did not include any gendered terminology or pronouns, the patient resource was also

**Table 1. Terminology Assessed in Patient Education Materials on Breast Reconstruction**

Gender Terminology	Pronouns
Women	She/her/hers
Transwomen	He/his/him
Men	Sie/zie/ze
Transmen	They
Nonbinary	Nonspecific (eg “you”)
No gender terms (eg “patients”)	

classified as inclusive. Descriptive statistics were used to evaluate the inclusion of terminology among academic websites. A chi-square test was used to evaluate for statistical significance of inclusive terminology based on the presence or absence of a comprehensive gender program. Statistical analyses were computed using Microsoft Excel, Version 16.44 (Microsoft Corporation One Microsoft Way, Redmond, Wash.) and JMP 15.1 (SAS Institute, Inc, SAS Campus Drive, Cary, N.C.). A critical value of significance was set at a *P* value of 0.05.

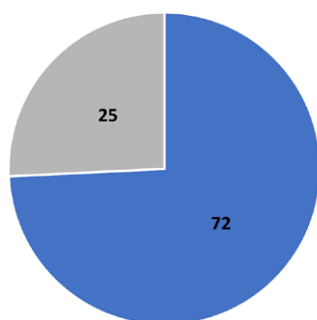
## RESULTS

As of January 2021, a total of 97 integrated and/or independent plastic and reconstructive surgery programs were available for inclusion in this analysis. A total of 72 programs (74.2%) referenced gender terminology, with 100% of these programs referencing “woman/women” alone (Fig. 1). The remaining 25 programs (25.8%) utilized nonspecific gender terminology (eg, “patients”).

When analyzing pronouns (“she/her,” “he/his,” “sie/zie,” “ze,” or “they”), the majority (86%) of programs utilized nonspecific, gender neutral pronouns typically written in second person singular (“you”). The pronoun “you” was occasionally interchanged with “patients” within the same patient education materials. “She/her” pronouns were used exclusively in 15 program web sites (15.5%). No programs (0%) utilized more than one pronoun or “sie/zie,” “ze,” or “they” pronouns outlined by the LGBTQIA+ Health Education Center (Fig. 2).

A total of 31 (32%) institutions advertised both top and bottom gender surgery on the website. Of the 31 programs offering top and bottom gender care, six programs (19.4%) utilized nonspecific gender terminology and 25 programs (80.6%) utilized “she/her” and “woman/women” terminology exclusively. Compared to programs

Use of gender terminology in online breast reconstruction patient education materials



■ Reference to women only    ■ Nonspecific gender terminology

**Fig. 1.** Of 97 total programs with an independent and/or integrated plastic and reconstructive surgery residency program, 72 programs referenced women alone in breast reconstruction patient education materials, and 25 programs did not specify gender within patient education materials (instead used the nonspecific “you” or the term “patient”); however, none of the programs utilized specific gender diverse terminology.

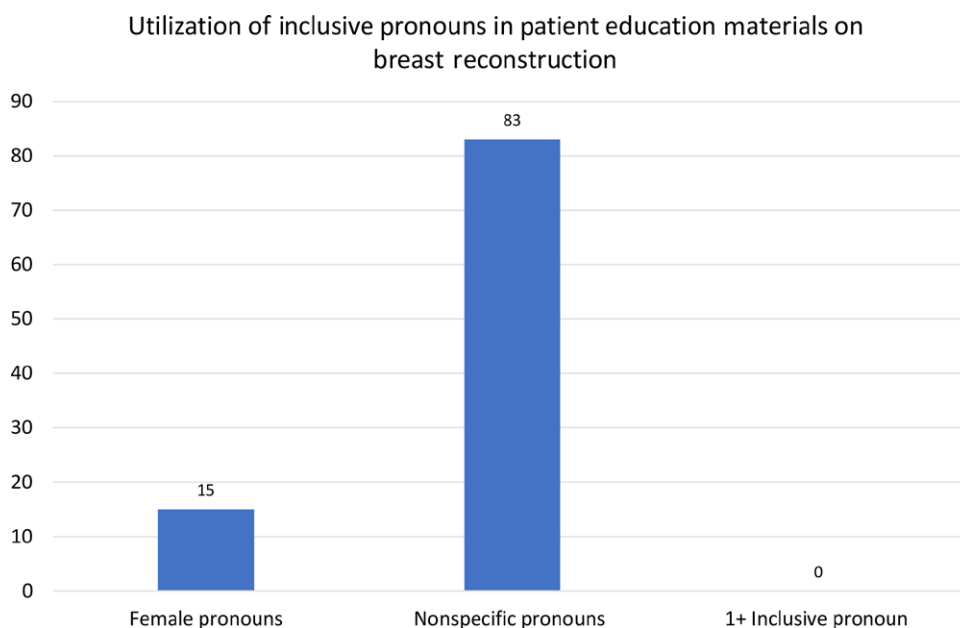
offering either top surgery alone or neither top nor bottom gender surgery, 19 programs (28.8%) used nonspecific gender terminology (eg, “patients”) and 47 (71.2%) used “she/her”- and “woman/women”-specific terminology (Table 2). Chi-square analysis comparing the presence of inclusive terminology based on the presence or absence of comprehensive gender programs was not statistically significant ( $\chi^2 = 0.98, P = 0.32$ ). Notably, neither programs with or without comprehensive gender-affirming care utilized more than one pronoun or gender diverse pronouns preferred by the LGBTQIA+ Health Education Center.

## DISCUSSION

Patient education tools serve as a form of patient support in the breast reconstruction decision making process.<sup>23</sup> Due to the inherently powerful role language plays in affirming and welcoming its listener or reader, patient education tools should strive to educate with intentional and validating terminology.<sup>1</sup> Specifically, among reconstruction candidates, the utilization of gender inclusive language is especially important for patients who already face multiple barriers to breast and chest care.<sup>24,25</sup> This study analyzed the presence of gender diverse terminology at major academic centers with integrated and/or independent plastic and reconstructive surgery programs, further stratified based on the extent of gender-affirming surgery offered. The authors aim for the results of this study to precipitate the use of inclusive language to better serve the diverse breast reconstruction patient population among patient education materials.

Within this study, web sites of all major plastic surgery academic programs were assessed for gender diverse terminology and the use of gender pronouns (“she/her,” “he/his,” “sie/zie,” “ze,” or “they”). Although most programs (86%) utilized “you” when a pronoun was included in patient education literature, 15 programs specifically limited language to “she/her/hers.” The majority (74%) of education materials referenced exclusively women. Furthermore, none of the programs utilized gender diverse or gender neutral pronouns outlined by the National LGBTQIA+ Health Education Center.

As the field of plastic and reconstructive surgery continues to make headways into gender affirmation surgery, several programs (32%) in this study offer both top and bottom gender-affirming surgeries as advertised on their web sites. These academic sites were classified as comprehensive gender programs. When comparing the use of gender diverse terminology based on the absence or presence of a comprehensive gender-affirming program, further analysis demonstrated that there was not a statistically significant difference. The findings of this study demonstrate an opportunity to improve inclusive language around gender in breast reconstruction patient education tools. This analysis found that only one in four programs utilized nongendered terminology, with the vast majority referencing women alone despite incorporating the nonspecific “you” within the education materials. At the time of this study, none of the programs use language concordant with the National LGBTQIA+ Health Education



**Fig. 2.** Use of gender diverse pronouns in breast reconstruction patient education materials as outlined by the National LGBTQIA+ Health Education Center. Although 15 programs used exclusively “she/her” pronouns, 83 used nonspecific pronouns (such as “you” or the term “patients”). No programs utilized “he/his,” “sie/zie,” “ze,” or “they.”

**Table 2. Presence or Absence of a Comprehensive Gender Program as a Predictor for Use of Gender Diverse Terminology**

	Presence of Comprehensive Gender Program	Absence of Comprehensive Gender Program	Total
Nonspecific gender terminology	6	19	25
Reference exclusively women	25	47	72

Center, despite individuals of any gender identity being possible breast reconstruction candidates.<sup>24</sup> Terminology such as “breast reconstruction for women, transwomen, men, transmen, and nonbinary patients” should be incorporated into the text; alternatively, using nongendered terminology such as “patients” would also allow for inclusivity. Notably, the presence of a comprehensive gender-affirming surgery program did not predict the use of gender inclusive language and demonstrates an even greater dissonance as such programs are on the forefront of gender-affirming care.

Inclusive language not only benefits the patient but also serves as a protective factor against implicit bias.<sup>26</sup> Therefore, strategies to combat implicit biases must include focusing on validating language. In the clinical setting, healthcare providers can assist gender diverse patients by asking for the pronouns the patient uses, as well as the language they use for their sexual anatomy; this practice may increase patient engagement and retention among these individuals.<sup>27</sup> Specifically for patients considering reconstruction after a breast cancer diagnosis, some may prefer the terminology “chest reconstruction” rather

than “breast reconstruction” during these important treatment conversations, and this terminology may also be incorporated into education materials. For example, the author may include “breast or chest reconstruction after a cancer diagnosis” as the patient education material heading.

From a patient education perspective, written materials provided both in-person and online should reflect the diversity of the breast reconstruction patient population. An excellent study by Goldhammer et al<sup>28</sup> provides recommendations on how healthcare providers can communicate with a gender diverse patient population. For example, recommendations within this study include greeting patients without gender-specific terms (such as “Ms/Mrs/Mr”), utilizing open-ended registration form questions, and examples of how to incorporate nonbinary pronouns.<sup>28</sup> The National LGBTQIA+ Health Education Center also provides several resources for healthcare providers, such as how to collect demographic data on health history forms, best practices for gender-affirming care, LGBTQIA+ glossary of terms for healthcare teams, among many other valuable modules and open access publications.<sup>29</sup> Furthermore, incorporation of gender diverse care considerations should be incorporated into both resident and staff training modules to further enhance workplace knowledge and expertise in caring for a gender diverse population. Taken together, gender diverse language and dialogue improves the care of gender diverse patients.<sup>30</sup> Therefore, due to the unique role plastic surgeons play in gender-affirming care, it becomes even more necessary that the terminology used in plastic and reconstructive surgery matches the excellence of surgical care offered.

Limitations of this study include analyzing exclusively online patient education materials. Surgeons and healthcare teams may choose to provide other education modalities, including but not limited to written materials, videos, images, and in-person counseling, which may further enhance inclusivity of a gender diverse population. Websites may not be updated to reflect changes being made on an institutional level or gender diverse initiatives being undertaken by these academic sites. Additionally, although the majority of breast reconstruction takes place within academic institutions, other healthcare entities offer breast reconstruction and were excluded from this study, potentially limiting representation of inclusive terminology in the field of breast reconstruction as a whole.<sup>21</sup>

Although prior studies have identified the lack of gender diverse pronouns in breast reconstruction resources and support modalities, little research has been done to determine the impact such language would have on improving utilization of healthcare by gender diverse patients.<sup>30,31</sup> Future work is needed to understand how environmental changes, such as utilizing gender inclusive language, directly impacts gender diverse patient satisfaction, patient-provider relationships, and surgical outcomes. Additionally, future studies may examine inclusiveness of gender terminology beyond online materials and outside of academic institutions.

## CONCLUSIONS

This study found that one in four breast reconstruction materials contain gender terminology specific to cis women; additionally, the presence of a comprehensive gender program was not predictive of gendered language in breast reconstruction patient education materials. Plastic surgeons should provide patient education materials that include all patients, with particular attention to language that includes a gender diverse population. Breast reconstruction conversations are often challenging for both providers and patients, and facilitating a safe, inclusive space with appropriate terminology is essential to positive and effective dialogue.

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